



SYSTEM OUTLINE

1. HEATER BLOWER MOTOR OPERATION

CURRENT IS APPLIED AT ALL TIMES THROUGH THE **FL HEATER** FUSE TO **TERMINAL 5** OF THE HEATER RELAY. WHEN THE IGNITION SW IS TURNED ON, CURRENT FLOWS THROUGH THE **GAUGE** FUSE TO **TERMINAL 3** OF THE HEATER RELAY → **TERMINAL 1** → **TERMINAL HR** OF THE A/C AUTOMATIC AMPLIFIER. AT THE SAME TIME, CURRENT ALSO FLOWS FROM THE **GAUGE** FUSE TO **TERMINAL IG** OF THE A/C AUTOMATIC AMPLIFIER AND **TERMINAL 4** OF THE BLOWER HI RELAY → **TERMINAL 3** → **TERMINAL FR** OF THE A/C AUTOMATIC AMPLIFIER AND **TERMINAL (B) 13** OF THE BLOWER SW.

(LOW SPEED OPERATION)

WHEN THE BLOWER SW IS PUSHED TO **LO** POSITION, THE CURRENT TO **TERMINAL HR** OF THE A/C AUTOMATIC AMPLIFIER FLOWS TO **TERMINAL GND** OF THE A/C AUTOMATIC AMPLIFIER → **GROUND** AND TURNS THE HEATER RELAY ON. AS A RESULT, THE CURRENT TO **TERMINAL 5** OF THE HEATER RELAY FLOWS TO **TERMINAL 4** → **TERMINAL 1** OF THE BLOWER MOTOR → **TERMINAL 2** → **TERMINAL 1** OF THE A/C POWER TRANSISTOR → **TERMINAL 2** → **GROUND** AND CAUSES THE BLOWER MOTORS TO ROTATE AT LOW SPEED.

(HIGH SPEED OPERATION)

WHEN THE BLOWER SW IS PUSHED TO **HI** POSITION, THE CURRENT TO **TERMINAL HR** OF THE A/C AUTOMATIC AMPLIFIER FLOWS TO **TERMINAL GND** OF THE A/C AUTOMATIC AMPLIFIER → **GROUND** AND TURNS THE HEATER RELAY ON. AT THE SAME TIME, THE CURRENT TO **TERMINAL 4** OF THE BLOWER HI RELAY ALSO FLOWS TO **TERMINAL 3** OF THE RELAY **TERMINAL FR** OF THE A/C AUTOMATIC AMPLIFIER → **TERMINAL GND** → **GROUND** AND TURNS THE BLOWER HI RELAY ON. AS A RESULT, THE CURRENT TO **TERMINAL 5** OF THE HEATER RELAY FLOWS TO **TERMINAL 4** → **TERMINAL 1** OF THE BLOWER MOTOR → **TERMINAL 2** → **TERMINAL 1** OF THE BLOWER HI RELAY → **TERMINAL 2** → **GROUND** WITHOUT PASSING THROUGH THE BLOWER RESISTOR, CAUSING THE BLOWER MOTOR TO ROTATE AT HIGH SPEED.

(MEDIUM SPEED OPERATION)

WHEN THE BLOWER SW IS PUSHED TO **M1** OR **M2** POSITION, THE CURRENT TO **TERMINAL HR** OF THE A/C AUTOMATIC AMPLIFIER FLOWS TO **TERMINAL GND** → **GROUND** AND TURNS THE HEATER RELAY ON. THEN, THE CURRENT TO **TERMINAL IG** OF THE A/C AUTOMATIC AMPLIFIER FLOWS TO **TERMINAL BLW** → **TERMINAL 3** OF THE A/C POWER TRANSISTOR → **TERMINAL 2** → **GROUND**.

AS A RESULT, THE CURRENT TO **TERMINAL 5** OF THE HEATER RELAY FLOWS TO **TERMINAL 4** → **TERMINAL 1** OF THE BLOWER MOTOR → **TERMINAL 2** → **TERMINAL 1** OF THE A/C POWER TRANSISTOR → **TERMINAL 2** → **GROUND** AND THE BLOWER MOTOR IS ROTATED AT MEDIUM SPEED BY THE A/C AUTOMATIC AMPLIFIER CONTROLLING THE CURRENT FLOWING FROM **TERMINAL 3** OF THE A/C POWER TRANSISTOR TO **TERMINAL 2**.

(DEF SYNCHRONIZED CONTROL FUNCTION)

WHEN THE DEF SW IN THE MODE SELECTION SW IS PUSHED, A SIGNAL IS INPUT INTO **TERMINAL DEF** OF THE A/C AUTOMATIC AMPLIFIER. THIS CAUSES THE A/C ON AND THE BLOWER SW IS TURNED TO AUTO MODE.

(AUTO FUCTION)

WHEN THE AUTO SW IN THE HEATER CONTROL SW IS PUSHED, A SIGNAL IS INPUT INTO **TERMINAL BAUTO** OF THE A/C AUTOMATIC AMPLIFIER. AT THE SAME TIME, THE ROOM TEMP. DECIDED BY THE HEATER CONTROL SW IS INPUT INTO **TERMINAL TSET** OF THE A/C AUTOMATIC AMPLIFIER AS A SIGNAL, A SIGNAL OF THE A/C SOLAR SENSOR IS INPUT INTO **TERMINAL TS** OF THE A/C AUTOMATIC AMPLIFIER AND A SIGNAL OF THE A/C ROOM TEMP. SENSOR IS INPUT INTO **TERMINAL TR** OF THE A/C AUTOMATIC AMPLIFIER. AS A RESULT, A/C SYSTEM IS ACTIVATED BY THE SIGNAL OF EACH SENSOR TO GET THE ROOM TEMP. DECIDED BY THE HEATER CONTROL SW AND THE A/C SYSTEM TAKES THE PROPER MEASURES FOR IT.

2. OPERATION OF AIR INLET CONTROL SERVO MOTOR

(SWITCHING FROM FRESH TO RECIRC)

WITH IGNITION SW TURNED ON, WHEN THE RECIRC SW IS PUSHED, CURRENT FLOWS FROM THE **GAUGE** FUSE TO **TERMINAL 1** OF THE AIR INLET CONTROL SERVO MOTOR → **TERMINAL 3** → **TERMINAL REC** OF THE A/C AUTOMATIC AMPLIFIER → **TERMINAL GND** → **GROUND**, THE MOTOR ROTATES AND THE DAMPER MOVES TO THE **RECIRC** SIDE. WHEN THE DAMPER IS MOVED TO THE **RECIRC** POSITON, THE CIRCUIT IS CUT OFF INSIDE THE SERVO MOTOR AND THE DAMPER STOPS AT THAT POSITION.

(SWITCHING FROM RECIRC TO FRESH)

WITH THE IGNITION SW TURNED ON, WHEN THE FRESH SW IS PUSHED, CURRENT FLOWS FROM **TERMINAL 1** OF THE AIR INLET CONTROL SERVO MOTOR → **TERMINAL 2** → **TERMINAL FRS** OF THE A/C AUTOMATIC AMPLIFIER → **TERMINAL GND** → **GROUND**, THE MOTOR ROTATES AND THE DAMPER MOVES TO THE **FRESH** SIDE. WHEN THE DAMPER IS MOVED TO THE **FRESH** POSITION, THE CIRCUIT IS CUT OFF INSIDE THE SERVO MOTOR AND THE DAMPER STOPS AT THAT POSITION.

3. OPERATION OF AIR VENT MODE CONTROL SERVO MOTOR

WITH THE IGNITION SW TURNED ON, CURRENT FLOWS FROM THE **GAUGE** FUSE TO **TERMINAL 5** OF THE AIR VENT MODE CONTROL SERVO MOTOR → **TERMINAL 6** → **GROUND**, AND THE DAMPER MOVES TO THE POSITION OF THE MODE SELECTION SW ON THE CONTROL SW WHICH IS ON. WHEN THE FOOT SW OF THE HEATER CONTROL SW IS TURNED ON WITH THE **DEF** POSITION, A SIGNAL IS INPUT FROM **TERMINAL 7** OF THE AIR VENT MODE CONTROL SERVO MOTOR TO **TERMINAL (B) 4** OF THE HEATER CONTROL SW. AS A RESULT, THE SERVO MOTOR OPERATES UNTIL THE DAMPER REACHES TO **DEF** POSITION. WHEN THIS OCCURS, THE SIGNAL TO THE HEATER CONTROL SW IS SHUT OFF AND ROTATION OF THE MOTOR STOPS. SWITCHING TO OTHER MOVEMENT IS CONTROLLED BY THE SERVO MOTOR ACCORDING TO THE FOLLOWING SIGNALS:

1. **FACE** POSITION, A SIGNAL INPUT FROM **TERMINAL 1** OF THE SERVO MOTOR TO **TERMINAL (A) 14** OF THE HEATER CONTROL SW.
2. **BI-LEVEL** POSITION, A SIGNAL INPUT FROM **TERMINAL 2** OF THE SERVO MOTOR TO **TERMINAL (A) 12** OF THE HEATER CONTROL SW.
3. **FOOT** POSITION, A SIGNAL INPUT FROM **TERMINAL 3** OF THE SERVO MOTOR TO **TERMINAL (A) 7** OF THE HEATER CONTROL SW.
4. **FOOT/DEF** POSITION, A SIGNAL INPUT FROM **TERMINAL 4** OF THE SERVO MOTOR TO **TERMINAL (B) 11** OF THE HEATER CONTROL SW.

4. AIR MIX CONTROL SERVO MOTOR

VOLTAGE IS APPLIED TO **TERMINALS 11** AND **12** OF THE A/C SYSTEM AMPLIFIER FROM THE TEMPERATURE CONTROL LEVER INSIDE THE HEATER CONTROL SW AND FROM THE POTENTIOMETER INSIDE THE AIR MIX CONTROL SERVO MOTOR. THIS VOLTAGE IS KEPT AT A FIXED LEVEL BY THE A/C SYSTEM AMPLIFIER. WHEN THE TEMPERATURE CONTROL LEVER OF THE HEATER CONTROL SW IS MOVED TO 'COOL', THE VOLTAGE APPLIED TO **TERMINAL 12** OF THE A/C SYSTEM AMPLIFIER FROM **TERMINAL (B) 3** OF THE HEATER CONTROL SW CHANGES. AT THIS TIME, THE A/C SYSTEM AMPLIFIER COMPARES THE VOLTAGE FROM **TERMINAL 2** OF THE AIR MIX CONTROL SERVO MOTOR WITH THE VOLTAGE APPLIED TO **TERMINAL 11** OF THE A/C SYSTEM AMPLIFIER. THIS ACTIVATES THE A/C SYSTEM AMPLIFIER, SO THE CURRENT FLOWS FROM **TERMINAL 6** OF THE AMPLIFIER TO **TERMINAL 5** OF THE AIR MIX CONTROL SERVO MOTOR → **TERMINAL 4** → **TERMINAL 1** OF THE A/C SYSTEM AMPLIFIER, AND THE AIR MIX CONTROL SERVO MOTOR CHANGES TO THE 'COOL' SIDE. THEN WHEN THE VOLTAGE FROM THE POTENTIOMETER INSIDE THE SERVO MOTOR EQUALS THE VOLTAGE FROM THE TEMPERATURE CONTROL LEVER INSIDE THE HEATER CONTROL SW, THE A/C SYSTEM AMPLIFIER CUTS OFF POWER TO THE MOTOR. WHEN THE TEMPERATURE CONTROL LEVER IS MOVED TO THE 'WARM' SIDE, THE A/C SYSTEM AMPLIFIER OPERATES THE SAME AS FOR 'COOL' OPERATION, SO THE CURRENT FLOWS FROM **TERMINAL 1** OF THE A/C SYSTEM AMPLIFIER TO **TERMINAL 4** OF THE AIR MIX CONTROL SERVO MOTOR → **TERMINAL 5** → **TERMINAL 6** OF THE A/C SYSTEM AMPLIFIER, CHANGING THE MOTOR TO THE 'WARM' SIDE. WHEN THE VOLTAGE OF THE POTENTIOMETER AND THE VOLTAGE OF THE TEMPERATURE CONTROL LEVEL ARE THE SAME, POWER TO THE MOTOR IS CUT OFF.

5. AIR CONDITIONING OPERATION

THE A/C AUTOMATIC AMPLIFIER RECEIVES VARIOUS SIGNALS, I.E., THE ENGINE RPM FROM THE IGNITER, OUTLET TEMPERATURE SIGNAL FROM THE A/C AMBIENT TEMP. SENSOR, COOLANT TEMPERATURE FROM THE A/C THERMISTOR, ETC.

WHEN THE ENGINE IS STARTED AND THE A/C SW IS ON, A SIGNAL IS INPUT TO THE A/C AUTOMATIC AMPLIFIER.

AS A RESULT, THE GROUND CIRCUIT IN THE A/C AUTOMATIC AMPLIFIER IS CLOSED.

AT THE SAME TIME, THE ENGINE CONTROL MODULE DETECTS THE A/C MAGNETIC CLUTCH IS ON AND THE A/C AUTOMATIC AMPLIFIER OPERATES.

OPEN DIRECTION TO AVOID LOWERING THE ENGINE RPM DURING A/C OPERATING.

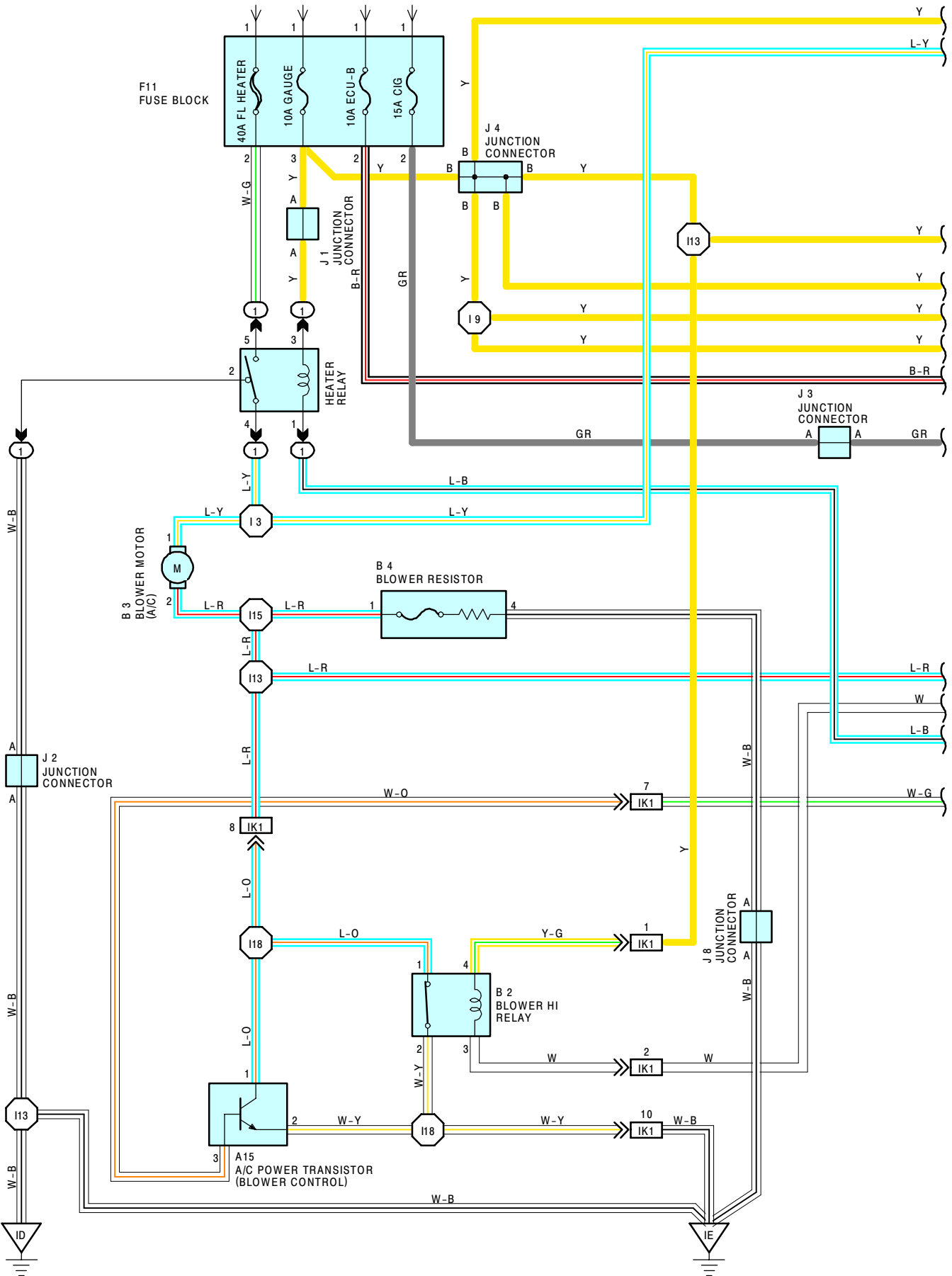
IF THE A/C AUTOMATIC AMPLIFIER DETECTS THE FOLLOWING CONDITIONS, IT STOPS THE AIR CONDITIONING.

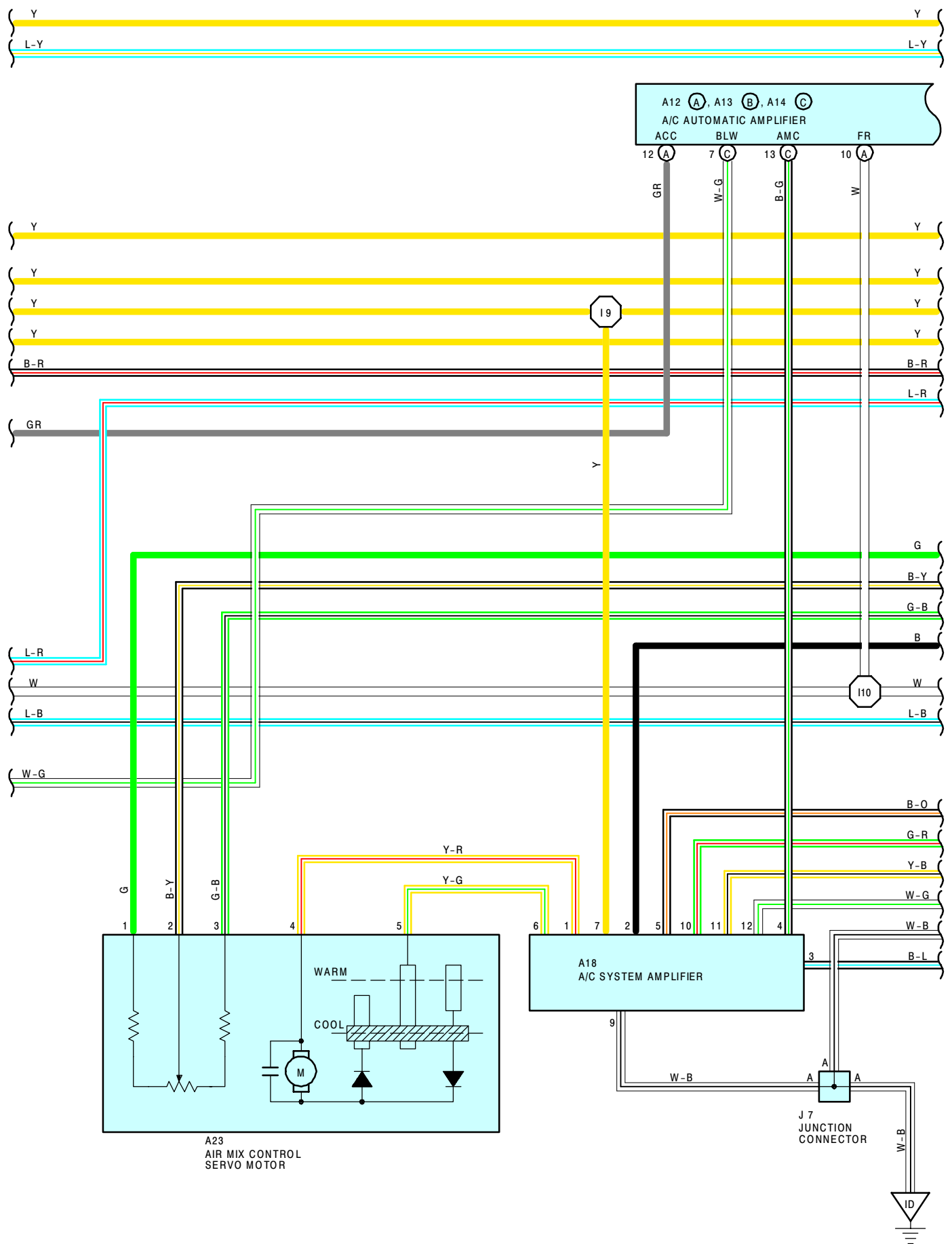
- * THE TEMPERATURE AT THE AIR VENTS IS LOW.
- * THERE IS A MARKED DIFFERENCE BETWEEN THE COMPRESSOR SPEED AND THE ENGINE SPEED.
- * THE REFRIGERANT PRESSURE IS ABNORMALLY HIGH OR ABNORMALLY LOW.
- * THE ENGINE SPEED DECREASES.
- * RAPID ACCELERATION OCCURS.



AUTOMATIC AIR CONDITIONING

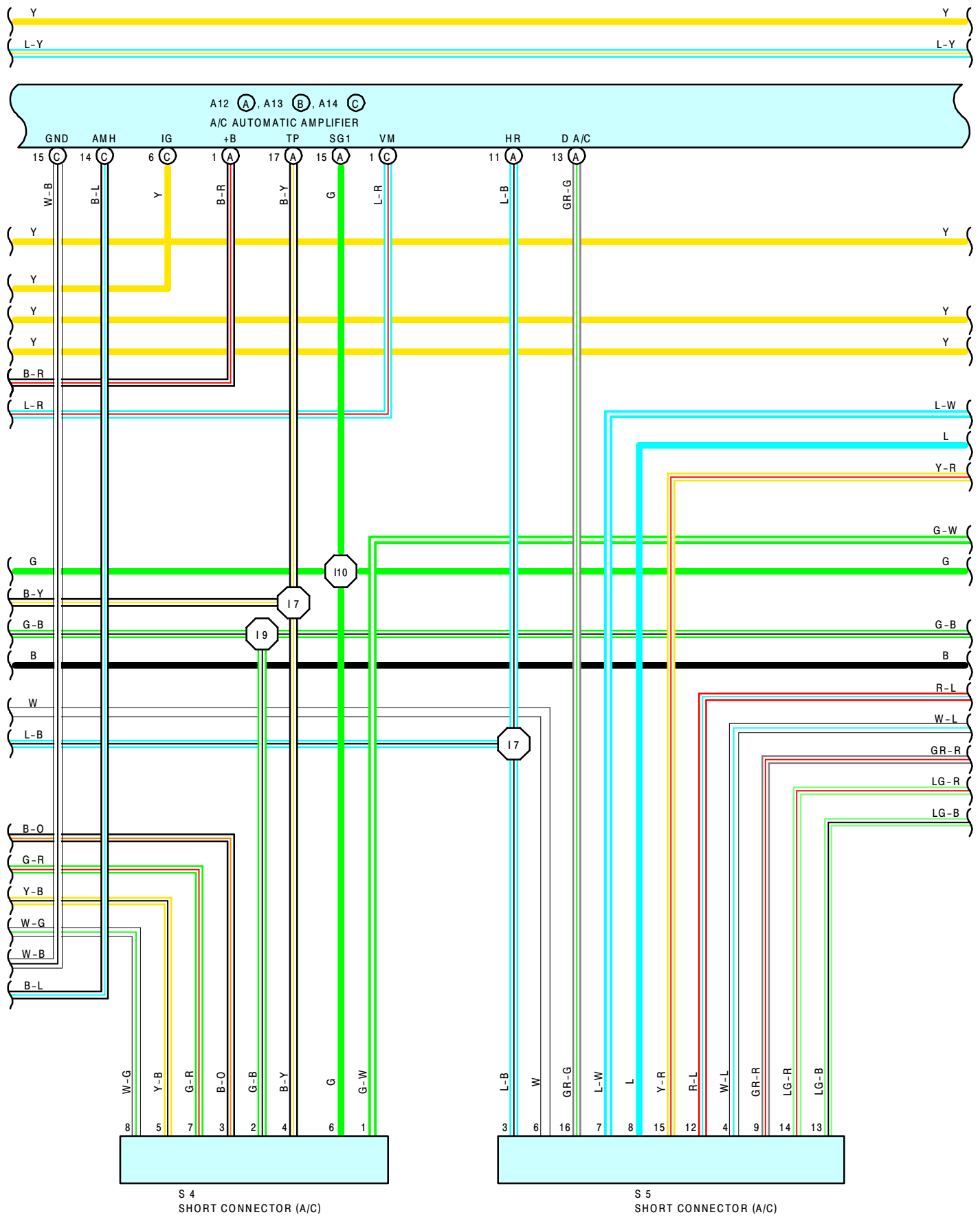
FROM POWER SOURCE SYSTEM (SEE PAGE 54)







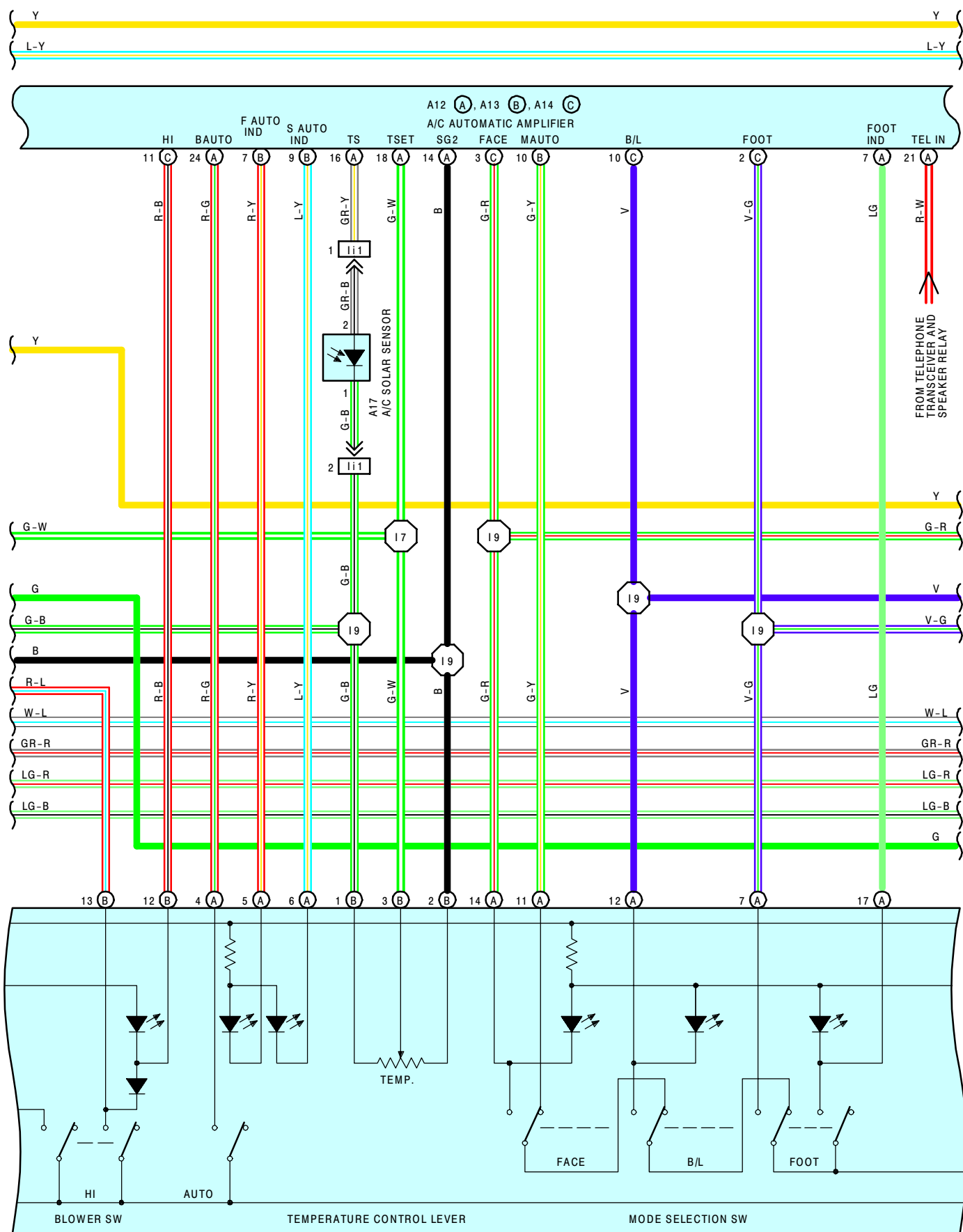
AUTOMATIC AIR CONDITIONING



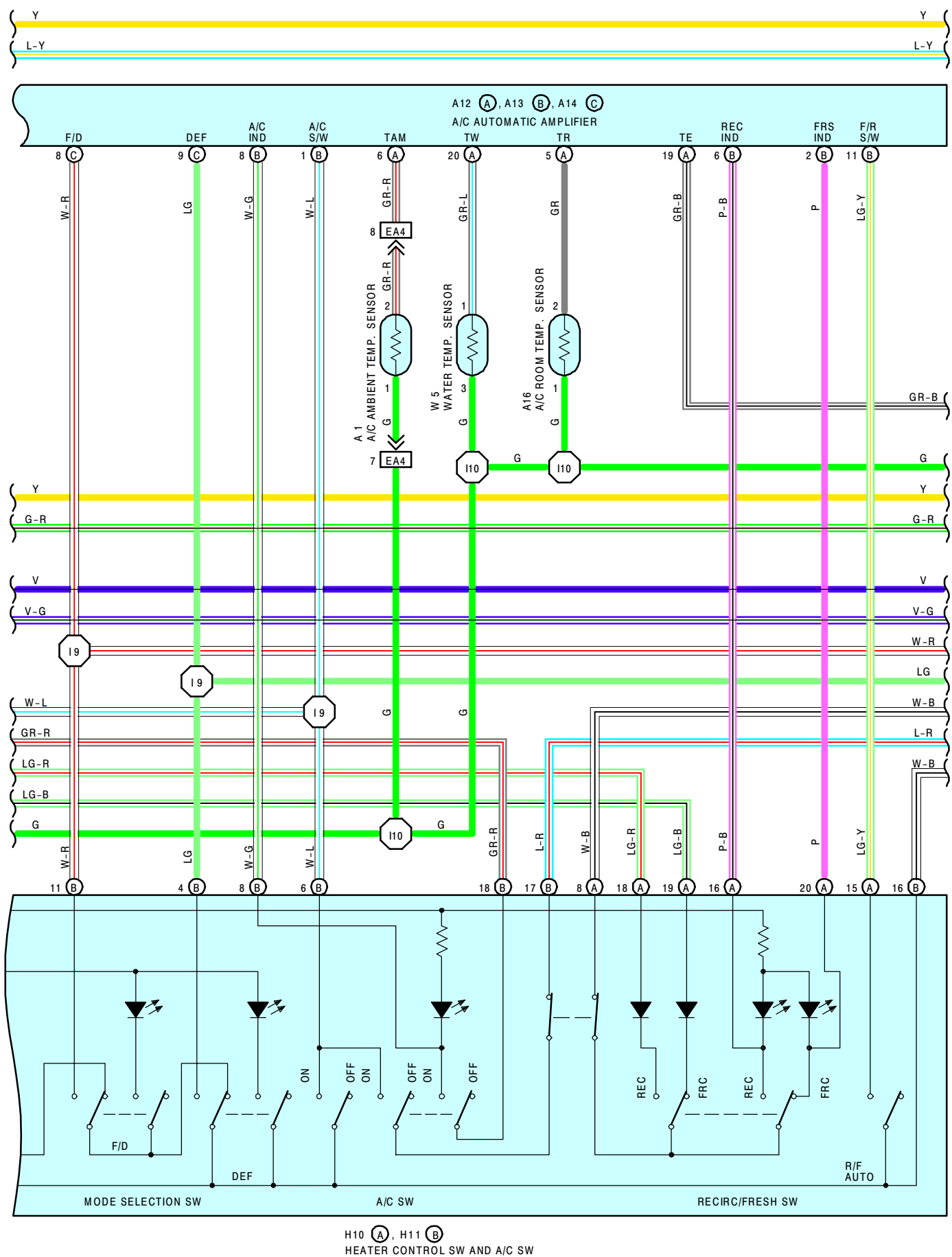




AUTOMATIC AIR CONDITIONING

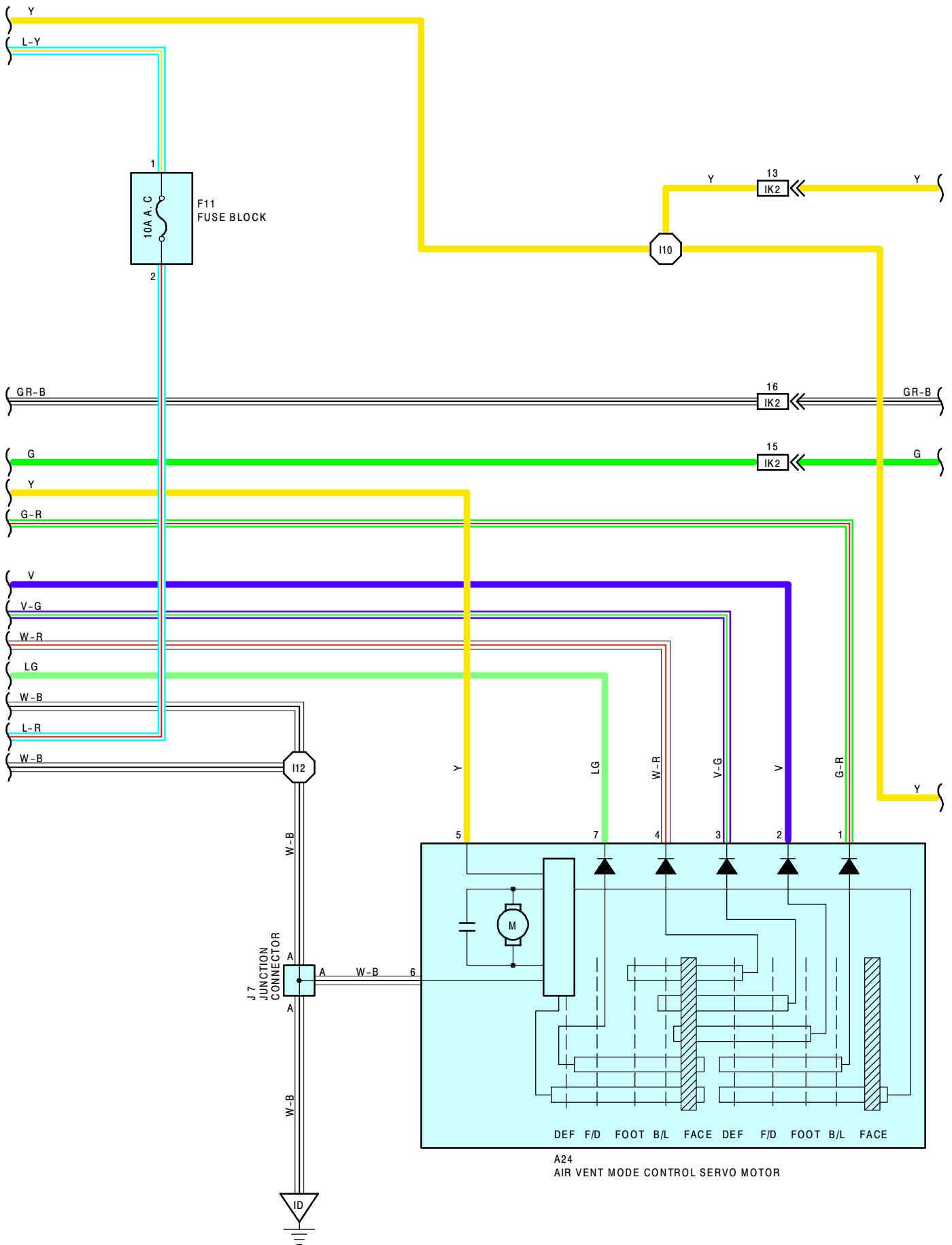


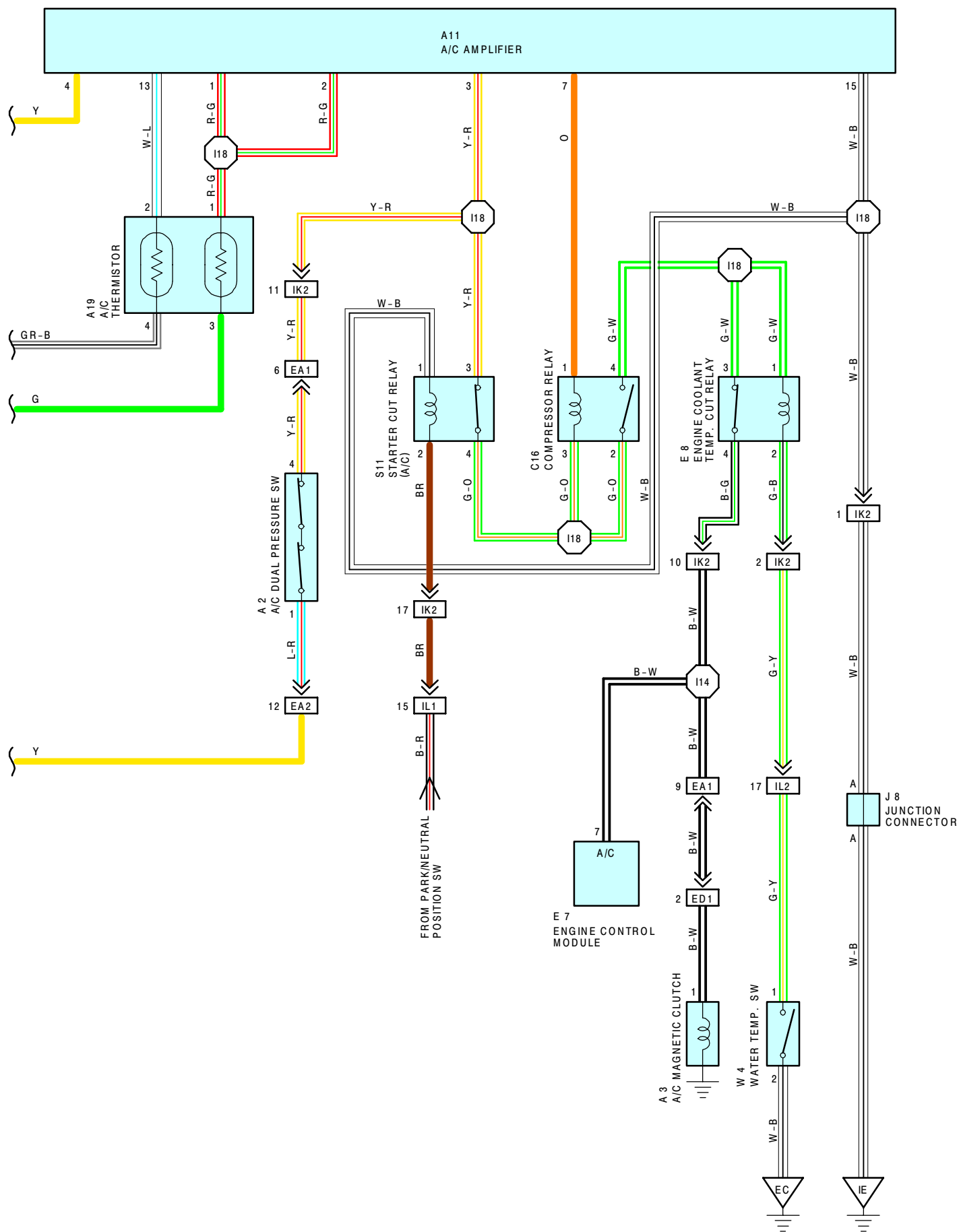
H10 (A), H11 (B)
HEATER CONTROL SW AND A/C SW





AUTOMATIC AIR CONDITIONING







AUTOMATIC AIR CONDITIONING

SERVICE HINTS

A 2 A/C DUAL PRESSURE SW

1-4 : OPEN ABOVE APPROX. 2.0 KG/CM² (28.4 PSI, 196 KPA) OR 32 KG/CM² (455 PSI, 3138 KPA)

A 3 A/C MAGNETIC CLUTCH

1-GROUND : APPROX. 3.7 Ω

A12 (A), A13 (B), A14 (C) A/C AUTOMATIC AMPLIFIER

+B -GROUND : ALWAYS. APPROX. 12 VOLTS

IG -GROUND : APPROX. 12 VOLTS WITH THE IGNITION SW AT ON POSITION

HR -GROUND : APPROX. 12 VOLTS WITH THE IGNITION SW AT ON POSITION AND DO NOT TURN THE BLOWER MOTOR
BELOW 1 VOLT WITH THE IGNITION SW AT ON POSITION AND TURN THE BLOWER MOTOR

ACC -GROUND : APPROX. 12 VOLTS WITH THE IGNITION SW AT ACC OR ON POSITION

BLW -GROUND : BELOW 1.5 VOLTS WITH THE IGNITION SW ON AND TURN THE BLOWER MOTOR

S5 -GROUND : 4-6 VOLTS WITH THE IGNITION SW ON

SG1 -GROUND : ALWAYS CONTINUITY

AMH -AMC : 1.3-1.9 VOLTS WITH THE IGNITION SW OFF

FRS -GROUND : APPROX. 12 VOLTS WITH THE FRESH SW ON

REC -GROUND : APPROX. 12 VOLTS WITH THE RECIRC SW ON

FACE -GROUND : APPROX. 12 VOLTS WITH THE FACE SW ON

DEF -GROUND : APPROX. 12 VOLTS WITH THE DEF SW ON

GND -GROUND : ALWAYS CONTINUITY

A15 A/C POWER TRANSISTOR (BLOWER CONTROL)

1-3 : APPROX. 2.0-2.4 KΩ



: PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A 1	22	A22	24	J 1	25
A 2	22	A23	24	J 2	25
A 3	22	A24	24	J 3	25
A11	24	B 2	24	J 4	25
A12	A 24	B 3	24	J 7	25
A13	B 24	B 4	24	J 8	25
A14	C 24	C16	24	S 4	25
A15	24	E 7	24	S 5	25
A16	24	E 8	24	S11	25
A17	24	F11	25	W 4	23
A18	24	H10	A 25	W 5	25
A19	24	H11	B 25		



: RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
1	20	R/B NO. 1 (LEFT KICK PANEL)



: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
EA1	30	COWL WIRE AND ENGINE ROOM MAIN WIRE (LEFT FENDER)
EA2		
EA4	30	COWL WIRE AND ENGINE ROOM MAIN WIRE (RIGHT FENDER)
ED1	30	OIL PRESSURE SWITCH WIRE AND ENGINE ROOM MAIN WIRE (NEAR THE AIR CLEANER)
IK1	34	COWL WIRE AND A/C SUB WIRE (BEHIND GLOVE BOX)
IK2		
IL1	34	ENGINE WIRE AND COWL WIRE (BEHIND GLOVE BOX)
IL2		
II1	32	COWL WIRE AND SECURITY WIRE (LEFT KICK PANEL)
	34	SOLAR SENSOR SUB WIRE AND COWL WIRE (BEHIND GLOVE BOX)



: GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
EC	30	AIR INTAKE CHAMBER
ID	32	LEFT KICK PANEL
IE	32	RIGHT KICK PANEL



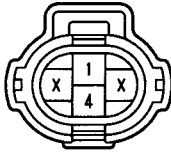
: SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
I 3	34	COWL WIRE	I12	34	COWL WIRE
I 4			I13		
I 7			I14		
I 9			I15		
I10			I18	34	A/C SUB WIRE

A 1 BLACK



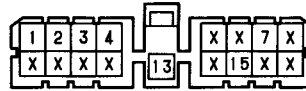
A 2 BLACK



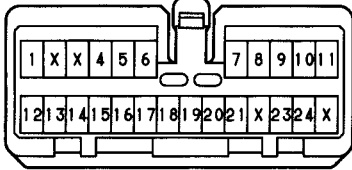
A 3 GRAY



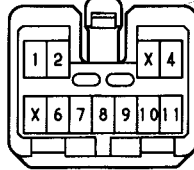
A11



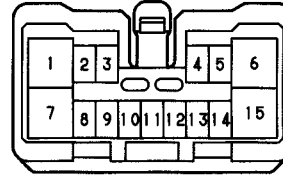
A12 (A)



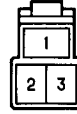
A13 (B)



A14 (C)



A15



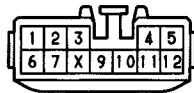
A16



A17



A18



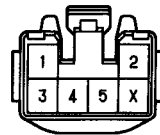
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A22



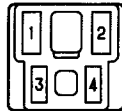
A23



A24



B 2



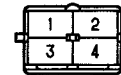
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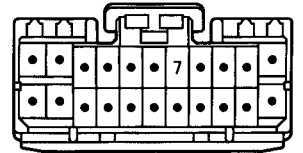
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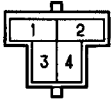
C16



E 7 DARK GRAY



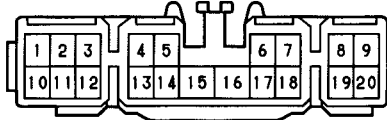
E 8



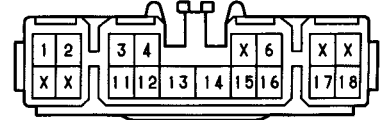
F11

(SEE PAGE 20)

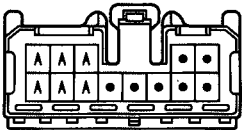
H10 (A)



H11 (B) BLUE



J 1



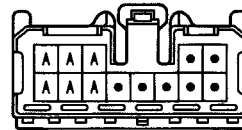
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J 2 BLUE

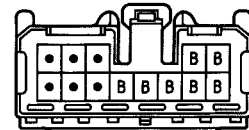


(HINT:SEE PAGE 7)

J 3



J 4



(HINT:SEE PAGE 7)

J 7 BLUE



(HINT:SEE PAGE 7)

J 8 BLUE

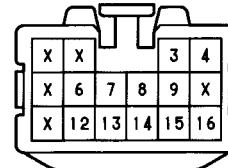


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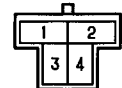
S 4



S 5



S11



W 4 GRAY



W 5

